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EXAMINER	
BUTLER, PATRICK NEAL	

ART UNIT	PAPER NUMBER
1742	

NOTIFICATION DATE	DELIVERY MODE
04/12/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/540,235	NORGAARD, MORTEN	
	Examiner	Art Unit	
	Patrick Butler	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *07 December 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-15,19,20 and 25-40* is/are pending in the application.

4a) Of the above claim(s) *9-15,19,20 and 35-40* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25,26,30 and 31* is/are rejected.

7)☒ Claim(s) *27-29 and 32-34* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's Amendments filed 07 December 2010 does not note proper marking for additions in Claim 25. For purposed of examination, the Examiner assumes the new text not underlined in lines 12, 13, and 28 and new text marked as a deletion in line 28 as intended to indicate an addition and as intended to not indicate an addition, respectively. For subsequent amendments, Applicant is requested to use proper claim markings for addition (see MPEP § 714(II)(C)(B) and 37 CFR § 1.121(c)(2) - "All claims being currently amended must be presented with markings to indicate the changes that have been made relative to the immediate prior version.").

Election/Restrictions

Applicant's election of Species B, longitudinal applicator configuration, in the reply filed on 11 February 2009 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 35-40 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as depending from withdrawn claims and as being drawn to a nonelected species A (Claims 35, 37, and 39) and C (Claims 36, 38, and 40), there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11 February 2009.

Double Patenting

Applicant is advised that should claims 27-29 be found allowable, claims 32-34 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 25, 26, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Kern (US Patent No. 5,051,223).

With respect to Claim 25, Kern teaches a concrete pipe with an impregnated inner wall (a method for manufacturing a lined concrete pipe comprised of an outer concrete layer and an inner layer containing a further material which forms a greater density inner surface liner) (see abstract and col. 1, lines 30-58). The pipe is formed between vertical pipe form 1 and roll head of the pipe press (providing an outer mould part and a core, a space formed between the outer mould part and the core having a shape of the lined concrete pipe) (see fig. and col. 1, lines 62-68). Concrete is introduced into the pipe form to produce a cylindrical mass (feeding concrete to the space formed between the outer mould part and the core) (see col. 1, lines 30-43).

Prestressing nozzles 13 of smoothing cylinder 5 supply a liquid impregnation material on the inner wall of the cylindrical mass (providing the core with an applicator comprising one or more supply openings positioned for delivering the further material below the concrete supplied to the space) (see col. 1, lines 62 through col. 2, line 34 and figure). Pressing rolls 6 provide periodic compression of the cylindrical concrete mass while the prestressing nozzles 13 of smoothing cylinder 5 supply a liquid impregnation material to the damp concrete (vibrating the concrete filling the space between the outer mould part and the core for maintaining the concrete in a fluid phase as the concrete is filling the space while simultaneously supplying the further material through the supply openings of the applicator for merging and diffusing the further material into the adjacent fluidized concrete) (see col. 1, lines 62 through col. 2, line 34) would necessarily constitute vibration, which would necessarily make the unit of pressing rolls 6 a vibrator (providing a vibrator within the core). Kern's rollerhead is rotated during introduction, compaction, and smoothing of the materials introduced into the mold, which causes the inner wall to include the impregnation material that the outer wall does not (at least partially rotating the applicator and core during the delivery of the concrete and further material for merging and diffusing the further material into the concrete adjacent the applicator) (see col. 1, lines 30-58 and col. 2, lines 17-67), which makes the surface more dense (to provide a sliding transition from the concrete and out to the further material, forming a mutually denser structural liner with a tight bond, the liner integrating together the concrete and further material, thereby forming an integral liner with the concrete pipe, providing a greater density surface on at least a portion of

an inner surface of the concrete pipe). During the process, the top of the pressure rollers 6, 6 smoothing cylinder 5 receives concrete, Kern's pipe press contacts and compacts the concrete with pressing rollers 6, and then smoothes the concrete with cylinder 5 while introducing the impregnation material (see col. 1, lines 30-43 and col. 1, lines 62 through col. 2, line 67). Thus, the rollerhead and pipe are necessarily moved longitudinally with respect to each other to allow the sequence (the core being movable upwardly through the outer mould part; feeding concrete to the space formed between the outer mould part and the core as the core moves upwardly within the outer mould part for filling the space with concrete).

Applicant refers to density in terms of density of surface structure and as being a degree of being impervious to entry at its surface (see Applicant's PCT Specification, page 4, lines 4-21). Thus, Kern meets the limitation of the "greater density" of the "further material" by being a protective layer material that is fine enough to permeate into the concrete (see col. 1, lines 14-16 and 30-43).

With respect to Claim 26, Kern teaches smoothing cylinder 5 contains prestressing nozzles 13 (the applicator unit is integrally formed with the core or by an applicator unit in direct connection with the core) (see col. 1, lines 62 through col. 2, line 34 and figure).

With respect to Claim 30, the impregnating resin is in the form of a liquid (see col. 2, line 57).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 25, 26, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kern (US Patent No. 5,051,223) in view of Hutchinson (US Patent No. 2,356,852).

With respect to Claims 25, 26, and 30, Kern teaches making a concrete pipe as described above.

However, if Kern's teaching that pressing rolls 6 provide periodic compression of the cylindrical concrete mass while the prestressing nozzles 13 of smoothing cylinder 5 supply a liquid impregnation material to the damp concrete (see col. 1, lines 62 through col. 2, line 34) is held to not necessarily constitute the claimed limitation of providing a vibrator within the core and vibrating the concrete filling the space between the outer mould part and the core for maintaining the concrete in a fluid phase as the concrete is filling the space while simultaneously supplying the further material through the supply openings of the applicator for merging and diffusing the further material into the adjacent fluidized concrete, Hutchinson teaches vibration of the core in producing concrete pipe (see page 2 of text, lines 3-22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Hutchinson's use of vibrations in Kern's core in order to

make a pipe with better wear resistance (see Hutchinson, page 2 of text, right column, lines 36-39).

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kern (US Patent No. 5,051,223) in view of in view of Steiro (US Patent No. 4,039,642) solely, or further in view of Hutchinson (US Patent No. 2,356,852).

With respect to Claim 31, Kern solely or further in view of Hutchinson (US Patent No. 2,356,852) teaches making a concrete pipe as described above.

However, Kern does not appear to expressly teach that the supply opening extend in the longitudinal direction of the core.

Steiro teaches making concrete pipe by using an opening that is longitudinal (the supply openings essentially extending in the longitudinal direction of the core) (see abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Steiro's longitudinal opening in Kern's core in order to facilitate expedited processing (see col. 1, lines 23-44) and because longitudinal openings fulfill the same purpose of providing molding material.

Allowable Subject Matter

Claims 27-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 32-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten to not be objected to under 37 CFR 1.75 as being a substantial duplicate of Claims 27-29 as indicated in the Double Patenting section in this Office Action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not teach or suggest the claimed process of applying an impregnating material (inner liner layer containing a further material) with additional steps of applying an impregnating material (inner liner layer containing a further material) to a ring of a concrete pipe before attaching the ring to the mold (outer mould part) and core (Claims 27 and 32), applying an impregnating material (inner liner layer containing a further material) to a ring of a concrete pipe after attaching the ring to the mold (outer mould part) and core (Claims 28 and 33), or attaching and reattaching a ring to the mold (outer mould part) and core (Claims 29 and 34). Specifically, Kern does not teach rings being attached. Cocke (US Patent No. 3,217,077) teaches applying a lining material to a form 38 (see fig. 1) and removing the form 38 (see fig. 5), but the form is not a ring that joins the pipe being made. Cocke's form 38 is in lieu of a moving internal mold such as taught by Kern.

Response to Arguments

Applicant's arguments filed 07 December 2010 have been fully considered, but they are not persuasive.

Applicant argues with respect to the 35 U.S.C. § 112, second paragraph, rejections. Applicant's arguments appear to be on the grounds that:

1) Applicant's Specification as originally filed provides support for a moving applicator in paragraphs [0018], [0025], [0037], abstract, and fig. 5.

Applicant argues with respect to the 35 U.S.C. § 103(a) rejections. Applicant's arguments appear to be on the grounds that:

2) Kern's concrete is not in a fluid phase as it is vibrated. Thus, the claim limitation of vibrating while the concrete is in a fluid phase is not met.

3) Kern's concrete is not fluid since the liner's pressure-applied penetrating liquid only reaches 10 mm.

4) Kern's concrete is not fluid since compacted and smoothed concrete would be certainly recognized as being substantially solid and certainly not fluidized.

5) Steiro does not provide for teaching filling a mold to an inside layer of a concrete pipe.

6) Ross's teaching of a raising applicator is unrelated to Kern since Ross is a porous mold filled with highly viscous material.

7) Hutchinson's use of vibration is not associated with promoting an inner layer having a greater density structural surface.

The Applicant's arguments are addressed as follows:

1 and 6) Applicant's arguments with respect to the limitation of "an applicator for delivering concrete" and raising said applicator have been considered but are moot in

view of Applicant's amendment to remove the limitation of "an applicator for delivering concrete."

1) In view of Applicant's amendment to Claim 25 to remove the limitation of "an applicator for delivering concrete" and raising said applicator, the Examiner withdraws the previously set forth 35 U.S.C. § 112, second paragraph, rejection of Claims 25, 26, and 30 as detailed in the Claim Rejections - 35 USC § 112 section of the Office Action dated 06 October 2010.

2 and 3) Kern's concrete is fluid during vibration because the concrete is fluid as introduced to the mold as recited above:

> Concrete is introduced into the pipe form to produce a cylindrical mass (feeding concrete to the space formed between the outer mould part and the core) (see col. 1, lines 30-43). Prestressing nozzles 13 of smoothing cylinder 5 supply a liquid impregnation material on the inner wall of the cylindrical mass (providing the core with an applicator comprising one or more supply openings positioned for delivering the further material below the concrete supplied to the space) (see col. 1, lines 62 through col. 2, line 34 and figure). Pressing rolls 6 provide periodic compression of the cylindrical concrete mass while the prestressing nozzles 13 of smoothing cylinder 5 supply a liquid impregnation material to the damp concrete (vibrating the concrete filling the space between the outer mould part and the core for maintaining the concrete in a fluid phase as the concrete is filling the space while simultaneously supplying the further material through the supply openings of the applicator for merging and diffusing

the further material into the adjacent fluidized concrete) (see col. 1, lines 62 through col. 2, line 34)…

2-4) Moreover, Kern's concrete is fluid during vibration because Kern's process is specifically directed to a one-step process rather than adding a layer to finished concrete (see col. 1, lines 7-22).

3) In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., diffusing into fluid concrete greater than 10 mm) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

4) Kern's concrete is fluid to the extent that it remains damp and unfinished as recited above:

> Pressing rolls 6 provide periodic compression of the cylindrical concrete mass while the prestressing nozzles 13 of smoothing cylinder 5 supply a liquid impregnation material to the damp concrete (vibrating the concrete filling the space between the outer mould part and the core for maintaining the concrete in a fluid phase as the concrete is filling the space while simultaneously supplying the further material through the supply openings of the applicator for merging and diffusing the further material into the adjacent fluidized concrete) (see col. 1, lines 62 through col. 2, line 34).

5 and 7) In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

5) Steiro is not relied upon for teaching applying a material to an inside layer of a concrete pipe. As recited above, Kern is relied upon for teaching applying a material to an inside layer of a concrete pipe:

> Prestressing nozzles 13 of smoothing cylinder 5 supply a liquid impregnation material on the inner wall of the cylindrical mass (providing the core with an applicator comprising one or more supply openings positioned for delivering the further material below the concrete supplied to the space) (see col. 1, lines 62 through col. 2, line 34 and figure).

6) In view of Applicant's amendment to Claim 25 to remove the limitation of "an applicator for delivering concrete" and raising said applicator, the Examiner withdraws the previously set forth 35 U.S.C. § 103(a) rejection of Claims 25, 26, and 30 as being unpatentable over Kern (US Patent No. 5,051,223) in view of in view of Steiro (US Patent No. 4,039,642) and Ross (US Patent No. 1,694,563) and the previously set forth 35 U.S.C. § 103(a) rejection of Claims 25, 26, and 30 as being unpatentable over Kern (US Patent No. 5,051,223) and in view of in view of Steiro (US Patent No. 4,039,642), Hutchinson (US Patent No. 2,356,852), and Ross (US Patent No. 1,694,563) as

detailed in the Claim Rejections - 35 USC § 103 section of the Office Action dated 06 October 2010.

7) As recited on page 10 of the Office Action mailed 06 October 2010:

> Hutchinson is not expressly relied upon promoting an inner layer having a greater density structural surface; Hutchinson is relied on for teaching vibration of the core in producing concrete pipe (see page 2 of text, lines 3-22), and Kern is relied upon for teaching that the rollerhead is rotated during introduction, compaction, and smoothing of the materials introduced into the mold, which causes the inner wall to include the impregnation material that the outer wall does not (see col. 1, lines 30-58 and col. 2, lines 17-67), which makes the surface more dense (inner layer of greater density in surface structure).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Butler whose telephone number is (571) 272-8517. The examiner can normally be reached on Mon.-Thu. 7:30 a.m.-5 p.m. and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. B./
Examiner, Art Unit 1742

/Christina Johnson/
Supervisory Patent Examiner, Art Unit 1742